

# PALMER AMARANTH

## *Amaranthus palmeri*

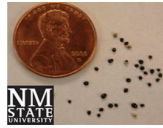
**TIMELINE:** *Native to the arid southwestern US and northwestern Mexico*

1915 - First reported in Virginia but was not considered problematic for some time

1989 - Documented in a weed survey in South Carolina

1995 - Ranked the most troublesome weed in cotton in the Carolinas

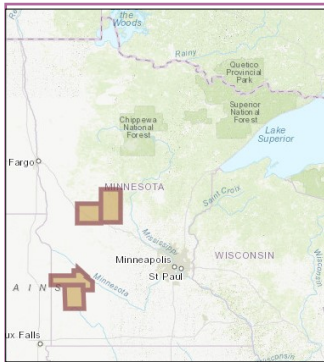
2009 - Ranked the most troublesome weed in cotton in the southern US



### DESCRIPTION

- \* Annual, 6-8 feet tall but can reach 10 feet or more
- \* Leaves are oval/diamond shaped, smooth, and alternate. There's a small sharp spine at the leaf tip.
- \* Some leaves have a whitish v-shaped mark on them, but not all plants display this trait
- \* Spreads by seed; one plant can produce 250,000 seeds
- \* Separate male & female plants

It has developed resistance to multiple classes of herbicides and their different modes of action, making it challenging to control. The PA found in Minnesota is NOT herbicide resistant.



### PALMER AMARANTH IN MINNESOTA

In 2016, PA was discovered in Yellow Medicine and Lyon Counties. In 2017, it was discovered in Douglas and Todd Counties. All infestations have been found in first year conservation plantings. The MN Dept of Ag has been working with the U of M Extension, USDA, landowners, and other partner to eradicate these infestations. Efforts to this point have been very successful.



Virginia Tech Weed ID Guide



PA looks similar to our native pigweeds such as tall waterhemp, redroot, and smooth pigweeds. Here are some distinguishing characteristics:

- Redroot & smooth pigweeds have fine hairs on their stems and leaves. PA and waterhemp do not.
- The petiole (stalk connecting leaf to the stem) is longer than the length of the leaf on PA. For tall waterhemp, the petiole will be only half the length of the leaf.
- Seedhead spikes on female PA are much taller (up to 3 feet long) and more prickly than waterhemp or redroot and smooth pigweed spikes.

### Common Tansy Treatment (Handout located on website)

Mechanical: Mow or clip	Before goes to seed, flowers just turning yellow	
Herbicide Treatment: Apply when plant 6"-12" high Add 2,4-D to mix to see results of spraying sooner than 3 weeks	1 oz. Escort or Telar + Water conditioner + non-ionic surfactant	.5 oz Escort+.5 oz Telar + Water Conditioner + non-ionic surfactant
	3.3 oz Opensight or Chapparral + Water Conditioner +Surfactant	
Cimarron Max	Part A= 1 oz/acre + Part B=4 pints/acre + water conditioner + surfactant	
<b>Measurements for Small Areas For Spot Treatment</b> ( ¼ teaspoon = 1 gram )		
Metsulfuron (Escort)	1 oz./Acre	¼ teaspoon or 1 gram/gal. of water + suitable adjuvant + water conditioner
Chlosulfuron (Telar)	1 oz./Acre	¼ teaspoon or 1 gram/gal. of water + suitable adjuvant + water conditioner
Metsulfuron + Aminopyralid (Opensight)	3 oz./Acre	1 teaspoons/gal. of water + suitable adjuvant + water conditioner
Metsulfuron + Aminopyralid (Chapparral)	3 oz./Acre	1 teaspoons/gal. of water + suitable adjuvant + water conditioner
Aminocyclopyrachlor+Chlorsulfuron (Perspective)	5 oz./Acre	1.5 teaspoons/gal. of water + suitable adjuvant + water conditioner
Aminopyralid (Milestone)	6 oz./Acre	1.75 teaspoon/gal. of water + suitable adjuvant + water conditioner
Streamline	7.5 oz./Acre	2.5 teaspoons/gal. of water + suitable adjuvant + water conditioner
<b>Order of Mixing Herbicides</b>	<b>First</b>	Mix herbicide in water (if granule or powders, use warm water and mix first then add to tank)
	<b>Second</b>	Mix conditioner in mixture if using hard water otherwise use soft water.
	<b>Third</b>	Last add surfactant
<i>Spray to the point of wetting the entire surface of target weeds, do not soak soil. Keep off trees, shrubs and desirable plant.</i>		